

REMARKS

Status of the Claims

Claims 1, 2, 3, and 5 are pending in the present application. Claim 4 is canceled. Claim 1 is amended according to the Examiner's recommendations. Claim 2 is amended for clarity. Support for amended claim 2 is found throughout the application as originally filed including Example 5 of the originally filed application. Claim 3 is amended to specify "claim 2" in lieu of "the claim 2." Claim 5 is newly added. Support for new claim 5 is found, for instance, in Example 5 of the originally filed application. No new matter is added by way of this amendment. Reconsideration is respectfully requested.

Issues Under 35 U.S.C. § 112, First Paragraph, Written Description

Claims 2-3 are rejected under 35 U.S.C. § 112, first paragraph, as allegedly failing to comply with the written description requirement, *see* Office Action, pages 2-4. Specifically, the Examiner states that the present application supports defecting or inactivating the endogenous thrY gene of a threonine-producing strain of *Corynebacterium glutamicum*, to increase the yield of threonine. However, the Examiner states that the strain described in claim 2, *i.e.*, a strain having a low requirement for threonine, is not a threonine-producing strain. Applicants traverse.

Although Applicants do not agree with the Examiner, the claims are amended in an effort to expedite prosecution. As amended, claim 2 is directed to a method for increasing the yield of threonine produced by a threonine-producing *Corynebacterium* strain comprising inactivating an endogeneous threonine importer gene, wherein the threonine importer gene comprises a continuous DNA sequence from the 1,772nd base to the 3,025th base among DNA sequences with the SEQ. ID. No. 1, thereby increasing the yield of threonine produced by the threonine-producing *Corynebacterium* strain.

In view of the foregoing amendment, the claims are limited to subject matter, which the Examiner agrees is supported by the present application. In particular, claim 2 no longer describes a strain having a low requirement for threonine. Accordingly, Applicants submit that amended claim 2 complies with the written description requirement. Claims 3 and 5, which incorporate all of the elements of amended claim 2, also comply with the written description requirement. Withdrawal of the rejection is respectfully requested.

Issues Under 35 U.S.C. § 112, Second Paragraph

Claim 2 is rejected under 35 U.S.C. § 112, second paragraph, as allegedly being indefinite, *see* Office Action, pages 4-5. Specifically, the Examiner states that claim 2 does not describe any method steps. Applicants traverse.

As amended, claim 2 specifies “inactivating an endogeneous threonine importer gene.” Accordingly, claim 2 specifies a method step. In view of the foregoing, withdrawal of the rejection is respectfully requested.

Issues Under 35 U.S.C. § 102

Nakagawa

Claim 1 remains rejected under 35 U.S.C. § 102(b) as allegedly anticipated by U.S. Publication No. 2002/0197605 to Nakagawa *et al.*, (“Nakagawa”), *see* Office Action, pages 5-8. Applicants traverse.

According to the Examiner, Nakagawa discloses a cloned DNA having 99.8% identity and 100% local similarity to the DNA sequence from the 1,772 base to the 3,025 bases of SEQ ID NO: 1. The Examiner further suggests that Applicants amend the claims to specify “consisting of” in lieu of “comprising” to overcome the teachings in Nakagawa, *see* Office Action, pages 7-8, bridging paragraph.

As amended, claim 1 describes an isolated DNA molecule encoding a threonine importer, wherein said DNA molecule *consists* of nucleotides 1,772 to 3,025 of SEQ. ID. No. 1. In view of the foregoing, Nakagawa does not anticipate claim 1. Withdrawal of the rejection is respectfully requested.

Pompejus

Claim 4 remains rejected under 35 U.S.C. § 102(e) as allegedly anticipated by U.S. Patent No. 6,696,561 to Pompejus *et al.*, *see* Office Action, pages 8-9. Applicants traverse.

Claim 4 is canceled. Accordingly, the rejection is moot in regard to this claim.

Palmieri

Claims 2-3 are rejected under 35 U.S.C. § 102(b) as allegedly anticipated by Palmieri *et al.*, *Arch. Microbiol.*, 1996, 165:48-54, (“Palmieri”), as evidenced by U.S. Publication No. 2008/0026432 to Park *et al.*, (“Park”), *see* Office Action, pages 9-10. Applicants traverse.

According to the Examiner, Palmieri describes a method wherein, *e.g.*, *C. glutamicum* strains, are exposed to various conditions such as, *e.g.*, excess serine, which inhibit threonine uptake. According to the Examiner, this teaching in Palmieri is encompassed by the allegedly broad scope of the instant claims, which specify “having a low threonine requirement.” The Examiner cites Park to evidence that the *C. glutamicum* importer gene is encoded by nucleotides 1772 to 3025 of SEQ ID NO: 1.

As noted above, amended claim 2 specifies inactivating an endogeneous threonine importer gene, wherein the threonine importer gene comprises a continuous DNA sequence from the 1,772nd base to the 3,025th base among DNA sequences with the SEQ. ID. No. 1, thereby increasing the yield of threonine produced by the threonine-producing *Corynebacterium* strain. Accordingly, amended claim 2 does not specify the phrase that the Examiner alleges encompasses the Palmieri strains. Further, Palmieri fails to teach or suggest increasing the yield of threonine produced by threonine-producing *Corynebacterium* strains by inactivating an endogeneous threonine importer gene.

In view of the foregoing, Palmieri does not anticipate claim 2. Dependent claims 3 and 5, which incorporate all of the elements of independent claim 2, also are not anticipated by Palmieri. In view of the foregoing, Applicants believe that the rejection is overcome and respectfully request withdrawal thereof.

CONCLUSION

All of the stated grounds of rejection have been properly traversed, accommodated, or rendered moot. Applicants therefore respectfully request that the Examiner reconsider all presently outstanding rejections and that they be withdrawn. It is believed that a full and complete response has been made to the outstanding Office Action, and as such, the present application is in condition for allowance.

Should there be any outstanding matters that need to be resolved in the present application, the Examiner is respectfully requested to contact L. Parker, PhD, Registration No. 46,046 at the telephone number of the undersigned below to conduct an interview in an effort to expedite prosecution in connection with the present application.

If necessary, the Director is hereby authorized to charge any fees required during the pendency of the above-identified application or credit any overpayment to Deposit Account No. 02-2448.

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Respectfully submitted,

By 

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